

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**LISTING OF CLAIMS:**

1-37. (Cancelled)

38. (Previously Presented) A method for detecting the presence of micromolar amounts of a toxicant comprising a metal atom in an aquatic, terrestrial, gaseous or industrial environmental sample, said method comprising contacting said sample putatively containing said toxicant with a nucleic acid molecule intercalated with a fluorescent dye; and screening for either dissociation of binding between said nucleic acid molecule and a said dye, wherein said dissociation or inhibition of binding is indicative of the presence of said toxicant.

39-41. (Cancelled)

42. (Previously Presented) A method according to Claim 38, wherein the metal atom is a heavy metal or a heavy metal ion.

43. (Previously Presented) A method according to Claim 38, wherein said fluorescent dye is selected from the group consisting of acridine orange and ethidium bromide.

44. (Previously Presented) A method according to Claim 38, wherein said nucleic acid molecule is immobilized to a substrate comprising glass, polystyrene, polymethacrylate, cellulose, nylon, polyvinylchloride or polypropylene.

45. (Previously presented) A method according to Claim 44 wherein said substrate is polystyrene or polymethacrylate.